

What is claimed is:

1. A method of processing an audio signal comprising the steps of:

synthesizing a plurality of (M) sound source signals to provide N sound source signals, said number N being smaller than said number M of said sound source signals, based on at least one of position information, movement information and localization information of said M sound sources;

synthesizing at least one information of position information, movement information and localization information which are corresponding to said synthesized sound source signals; and

localizing said N synthesized sound source signals in sound image based on said synthesized information.

2. A method of processing an audio signal according to claim 1, wherein said sound image localization is a virtual sound image localization for obtaining two-channel reproduced signals which are supplied to a pair of acoustic transducers to localize a sound image at an arbitrary position around a listener.

3. A method of processing an audio signal according to claim 1, wherein said information corresponding to at least one sound source signal of said M sound source signals and/or said

synthesized information corresponding to at least one synthesized sound source signal of said N synthesized sound source signals is changed by a change instruction.

4. A method of processing an audio signal according to claim 3, wherein said change instruction is supplied by users' operation.

5. A method of processing an audio signal according to claim 3, wherein said change instruction is obtained by detecting movement of listener's head.

6. A method of processing an audio signal according to claim 1, further comprising the step of supplying random fluctuations to said information corresponding to at least one sound signal of said M sound source signals and/or said synthesized information corresponding to at least one synthesized signal of said N synthesized sound source signals.

7. A method of processing an audio signal according to claim 1, wherein said number (N) of said synthesized sound source signals is 2 or greater, at least one of said synthesized information corresponding to said synthesized sound source signals is localization information and other synthesized information are localization information relative to said localization information.

8. A method of processing an audio signal according to claim 1, further comprising the steps of changing a video signal in response to changes of reproducing localization positions of said M sound source signals or said N synthesized sound source signals and outputting said video signals.

9. A method of processing an audio signal comprising the steps of:

synthesizing N sound source signals from a plurality of (M) sound source signals where N is smaller than M;

localizing said N synthesized sound source signals in virtual sound image based on a plurality of previously-determined localization positions;

storing a plurality of reproducing audio signals, localized in virtual sound image, in memory means; and

reading and reproducing said reproducing audio signal from said memory means in response to reproducing localization positions of said synthesized sound source signals.

10. A method of processing an audio signal according to claim 9, wherein a reproducing localization position of said synthesized sound source signal is changed by a change instruction.

11. A method of processing an audio signal according

to claim 10, wherein said change instruction is supplied by users' operation.

12. A method of processing an audio signal according to claim 10, wherein said change instruction is obtained by detecting movement of listener's head.

13. A method of processing an audio signal according to claim 9, further comprising the step of supplying random fluctuations to said reproducing localization position of said reproduced audio signal read out from said memory means.

14. A method of processing an audio signal according to claim 9, wherein said number (N) of said synthesized sound source signals is 2 or larger, at least one of said synthesized information corresponding to said synthesized sound source signals is localization information and other synthesized information are localization information relative to said localization information.

15. An apparatus for processing an audio signal comprising:

means for synthesizing a plurality of (M) sound source signals to provide N sound source signals, said number N being smaller than said number M of said sound source signals, based on at least one of position information, movement information

and localization information of said M sound sources;

means for generating synthesized information by synthesizing information corresponding to said synthesized sound source signals from said information of said M sound sources; and

signal processing means for localizing said N synthesized sound source signals in sound image based on said synthesized information.

16. An apparatus for processing an audio signal according to claim 15, wherein said sound image localization in said signal processing means is a virtual sound image localization for obtaining two-channel reproduced signals which are supplied to a pair of acoustic transducers to localize a sound image at an arbitrary position around a listener.

17. An apparatus for processing an audio signal comprising:

means for generating synthesized sound source signals by synthesizing N sound source signals from a plurality of (M) sound source signals where N is smaller than M;

signal processing means for providing a plurality of sets of reproduced audio signals by localizing said N synthesized sound source signals in virtual sound image based on a plurality of sets of previously-determined localization positions;

memory means for storing a plurality of sets of reproduced

audio signals obtained by said signal processing means; and
reproducing means for reading and reproducing said
reproduced audio signal from said memory means in response to
reproducing localization position of said synthesized sound
source signal.

18. An apparatus for processing an audio signal
according to claim 17, wherein said sound image localization
in said signal processing means is a virtual sound image
localization for obtaining two-channel reproduced signals which
are supplied to a pair of acoustic transducers to localize a
sound image at an arbitrary position around a listener.

19. An apparatus for processing an audio signal
comprising signal processing means supplied with synthesized
sound source signals which results from synthesizing a
plurality of (M) sound source signals to provide N signals
where N is smaller than M of said sound source signals based
on at least one information of position information, movement
information and localization information of said M sound
sources and synthesized information synthesized to said
synthesized sound source signal as at least one information of
corresponding position information, movement information and
localization information and which localizes said synthesized
sound source signal in sound image based on said synthesized
information.

20. An apparatus for processing an audio signal according to claim 19, wherein said sound image localization in said signal processing means is a virtual sound image localization for obtaining two-channel reproduced signals which are supplied to a pair of acoustic transducers to localize a sound image at an arbitrary position around a listener.

21. An apparatus for processing an audio signal comprising:

means supplied with a plurality of sets of reproduced audio signals which result from localizing virtual sound images of synthesized sound source signals synthesized to N signals from a plurality of (M) sound source signals, the number N being smaller than the number M of said sound source signals, based on a plurality of sets of previously-determined localization positions; and

means for selecting and reproducing one set of reproduced audio signals from said plurality of sets of reproduced audio signals in response to reproduced localization positions of said synthesized sound source signals.

22. A recording medium in which there are recorded synthesized sound source signals in which a plurality of (M) sound source signals are synthesized to N signals whose number N is smaller than the number (M) of said sound source signals based on at least one information of position information,

movement information and localization information of said sound source and synthesized information synthesized as at least one information of position information, movement information and localization information corresponding to said synthesized sound source signals in association with each other.

23. A recording medium according to claim 22, wherein said synthesized sound source signals are two-channel reproduced signals which are supplied to a pair of acoustic transducers and thereby sound images are localized at reproduced localization positions around a listener.